intersecting with each other, the first electrode **21** or the second electrode **22** must be open at intersection position of the first electrode **21** and the second electrode **22** so that the first electrode **21** and the second electrode **22** are not switched on, in order to transmit the piezoelectric signal by the open first electrodes **21** or second electrodes **22**, the open first electrodes **21** or second electrodes **22** are bridged by the bridging portion **5**, so that the open first electrodes **21** or second electrodes **22** can transmit the piezoelectric signal. The present embodiment takes the first electrode **21** being open as an example. It should be understood that, if the second electrode **22** is open, the bridging portion **5** similarly bridges the open second electrodes **22**, which will not be described in detail herein.

[0059] In the present embodiment, the sensor **4** is connected to the bridging portion **5**.

[0060] Of course, a glass cover (not shown in the figures) is further provided above the sensor **4** to protect the touch substrate, and the transmittance of the touch substrate is not affected.

[0061] The sensor **4** is provided in the touch substrate manufactured by the manufacturing method of touch substrate of the present embodiment, when a touch occurs, a piezoelectric signal can be generated from the sensor **4** and is transmitted by the electrode layer **3** for the touch substrate sensing position of touch point, the position of the touch point is determined without need of coupling capacitance to be formed between the finger and the sensing electrode and the driving electrode, even if the finger of the user wears a glove or other insulation medium to touch the touch substrate, the position of the touch point still can be determined accurately.

Fourth Embodiment

[0062] Referring to FIG. **6**, the present embodiment provides a driving method of the touch substrate of the first embodiment or the second embodiment, the driving method comprises:

[0063] step **201**, generating a piezoelectric signal when the sensor **4** is deformed by a touch; and

[0064] step **202**, transmitting the piezoelectric signal by the electrode layer **2** for the touch substrate sensing position of touch point.

[0065] In the present embodiment, the touch substrate further comprises a sensing chip connected to the electrode layer for the touch substrate sensing position of touch point.

[0066] Specifically, when the sensor **4** is deformed by action of external force, a polarization phenomenon occurs therein, and simultaneously, positive and negative charges are respectively generated on two opposite surfaces thereof. When the external force disappears, the sensor **4** is restored to the state of non-charged. That is to say, when a user touches the surface of the touch substrate by a finger, the sensor **4** is subjected to a vertical pressure and is bent in a direction perpendicular to a horizontal direction, and due to piezoelectric effect, a piezoelectric signal is generated between the two opposite surfaces of the sensor **4**, the piezoelectric signal is positioned by the first electrode **21** and the second electrode **22** intersected with each other, and a corresponding touch response is generated.

[0067] The sensor **4** is provided in the touch substrate driven by the driving method of touch substrate of the present embodiment, when a touch occurs, a piezoelectric signal can be generated from the sensor **4** and is transmitted by the electrode layer **3** for the touch substrate sensing position of touch point, the position of the touch point is determined without need of coupling capacitance to be formed between the finger and the sensing electrode and the driving electrode, even if the finger of the user wears a glove or other insulation medium to touch the touch substrate, the position of the touch point still can be determined accurately.

Fifth Embodiment

[0068] The present embodiment provides a touch panel comprising an array substrate, a color filter substrate and the touch substrate of the first embodiment or the second embodiment.

[0069] The sensor **4** is provided in the touch substrate of the touch panel of the present embodiment, when a touch occurs, a piezoelectric signal can be generated from the sensor **4** and is transmitted by the electrode layer **3** for the touch substrate sensing position of touch point, the position of the touch point is determined without need of coupling capacitance to be formed between the finger and the sensing electrode and the driving electrode, even if the finger of the user wears a glove or other insulation medium to touch the touch substrate, the position of the touch point still can be determined accurately.

Sixth Embodiment

[0070] The present embodiment provides a touch device comprising the touch panel of the fifth embodiment.

[0071] The touch device may be any touch-sensitive product or member with display function, such as an electronic paper, a mobile phone, a tablet computer, a television, a display, a notebook computer, a digital photo frame, a navigator and the like.

[0072] The sensor **4** is provided in the touch substrate of the touch panel included in the touch device of the present embodiment, when a touch occurs, a piezoelectric signal can be generated from the sensor **4** and is transmitted by the electrode layer **3** for the touch substrate sensing position of touch point, the position of the touch point is determined without need of coupling capacitance to be formed between the finger and the sensing electrode and the driving electrode, even if the finger of the user wears a glove or other insulation medium to touch the touch substrate, the position of the touch point still can be determined accurately.

[0073] It could be understood that the above embodiments are merely exemplary embodiments adopted for describing the principle of the present invention, but the present invention is not limited thereto. Various variations and improvements may be made for those with ordinary skill in the art without departing from the spirit and essence of the present invention, and these variations and improvements shall also be encompassed within the protection scope of the present invention.

1. A touch substrate, comprising: a base substrate, and an electrode layer, a bridging portion and a sensor provided above the base substrate, the electrode layer comprises a plurality of first electrodes and a plurality of second electrodes, the first electrode and the second electrode are provided intersecting with each other, the sensor corresponds to intersection position of the first electrode and the second electrode, and is connected to the first electrode and the second electrode respectively, wherein the sensor is configured to generate a piezoelectric signal when a touch